IN REPLY
REFER TO: Joint Interoperability Test Command (JTE)   **16 Dec 08**

MEMORANDUM FOR DISTRIBUTION

SUBJECT: Extension of the Special Interoperability Test Certification of Veraz I-Gate 4000
            Edge with Software Version C 2.5.1.6_ES

References: (a) DoD Directive 4630.5, "Interoperability and Supportability of Information
                  Technology (IT) and National Security Systems (NSS)," 5 May 2004
            (b) CJCSI 6212.01D, "Interoperability and Supportability of Information
                  Technology and National Security Systems," 8 March 2006
            (c) through (f), see Enclosure

1. References (a) and (b) establish the Defense Information Systems Agency (DISA), Joint
Interoperability Test Command (JITC), as the responsible organization for interoperability test
certification.

2. The Veraz I-Gate 4000 Edge with Software Version C 2.5.1.6_ES is hereinafter referred to as
the System Under Test (SUT). The SUT met all of the interface and functional requirements and
is certified for joint use within the Defense Switched Network (DSN). The SUT met the critical
interoperability requirements for a Strategic Network Element (S-NE) as set forth in Appendix 9
of references (c) and (d) using test procedures derived from reference (e). No other
configurations, features, or functions, except those cited within this report, are certified by the
JITC, or authorized by the Program Management Office for use within the DSN. This
certification expires upon changes that affect interoperability, but no later than three years from
the date of the original memorandum (8 April 2008).

3. The extension of this certification is based upon a desktop review. The original certification
is based on interoperability testing conducted by JITC and a review of the vendor's Letters of
Compliance (LoC). Interoperability testing was conducted by JITC at the Global Information
Grid Network Test Facility, Fort Huachuca, Arizona, from 19 November through
14 December 2007 and documented in reference (f). Review of the vendor's LoC was
completed on 14 December 2007. Validation of new S-NE latency requirements as set forth in
Appendix 9 of reference (d) was completed on 22 February 2008. All interoperability
certification testing was conducted with two BPSM/XPSM cards for internal redundancy. A
desktop review was requested because the I-Gate 4000 EDGE meets the reliability requirements
with a single BPSM/XPSM card. The desktop review request was approved on
11 December 2008.

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4. The SUT Interoperability Test Summary is shown in Table 1 and the Capability and Feature Requirements used to evaluate the interoperability of the SUT are indicated in Table 2.

Table 1. SUT Interoperability Test Summary

DSN Access Interfaces			
Interface & Signaling	**Critical**	**Status**	**Remarks**
T1 CAS (AMI/SF) DTMF, MFR1	No[1]	Certified	Met all CRs and FRs.
T1 CAS (B8ZS/ESF) DTMF, MFR1	No[1]	Certified	Met all CRs and FRs.
T1 PRI (ANSI T1.607/T1.619a)	No[1]	Certified	Met all CRs and FRs.
T1 SS7 (ANSI T1.619a)	No[1]	Certified	Met all CRs and FRs.
E1 CAS (HDB3) DTMF, MFR1, DP	No[1] (Europe only)	Certified	Met all CRs and FRs.
E1 ISDN PRI (ITU-T Q.955.3)	No[1] (Europe only)	Certified	Met all CRs and FRs.
E1 SS7 (ANSI T1.619a)	No[1] (Europe only)	Certified	Met all CRs and FRs.
DSN Transport Interfaces			
Transport Level	**Critical**	**Status**	**Remarks**
E1 (HDB3) Proprietary	No[2]	Certified	Met all CRs and FRs.
T1 (B8ZS/ESF) Proprietary	No[2]	Certified	Met all CRs and FRs.
100 Mbps Ethernet	No[2]	Certified	Met all CRs and FRs.
Features And Capabilities			
Features And Capabilities	**Critical**	**Status**	**Remarks**
Synchronization	Yes	Certified	Met all CRs and FRs.
Network Management	Yes	Certified	Met all CRs and FRs.
Security	Yes	See note 3.	See note 3.

NOTES:
1   The GSCR does not stipulate a minimum Access interface requirement for a Strategic or Tactical Network Element.
2   The GSCR does not stipulate a minimum Transport interface requirement Strategic or Tactical Network Element.
3   Information assurance testing is accomplished via DISA-led Information Assurance test teams and published in a separate report.

LEGEND:

AMI	Alternate Mark Inversion	ISDN	Integrated Services Digital Network
ANSI	American National Standards Institute	ITU-T	International Telecommunication Union – Telecommunication
B8ZS	Bipolar Eight Zero Substitution		Standardization Sector
CAS	Channel Associated Signaling	Mbps	Megabits per second
CRs	Capability Requirements	MFR1	Multi-Frequency Recommendation 1
DISA	Defense Information Systems Agency	MLPP	Multi-Level Precedence and Preemption
DP	Dial Pulse	PRI	Primary Rate Interface
DSN	Defense Switched Network	Q.955.3	ISDN Signaling Standard for E1 MLPP
DSS1	Digital Subscriber Signaling 1	SF	Super Frame
DTMF	Dual Tone Multi-Frequency	SS7	Signaling System 7
E1	European Basic Multiplex Rate (2.048 Mbps)	SUT	System Under Test
ESF	Extended Super Frame	T1	Digital Transmission Link Level 1 (1.544 Mbps)
FRs	Feature Requirements	T1.607	ISDN – Layer 3 Signaling Specification for Circuit Switched
GSCR	Generic Switching Center Requirements		Bearer Service for DSS1
HDB3	High Density Bipolar 3	T1.619a	SS7 and ISDN MLPP Signaling Standard for T1

Table 2. SUT Capability and Feature Interoperability Requirements

DSN Interfaces			
DSN Access Interfaces		**Requirements Required or Conditional**	**References**

Interface	**Critical**	• DS1 Interface Characteristics (C)
		• DS1 Supervisory Channel Associated Signaling (C)
		• DS1 Clear Channel Capability (C)
		• DS1 Alarm and Restoral Requirements (C)
		• E1 Interface Characteristics (C)
		• E1 Supervisory Channel Associated Signaling (C)
		• E1 Clear Channel Capability (C)
		• E1 Alarm and Restoral Requirements (C)
		• MOS (R)
		• BERT (R)
		• Secure Transmission (Voice and Data) (R)
		• Modem (R)
		• Facsimile (R)
		• Call Control Signals (R)
		• Call Congestion (R)
		• Voice Compression (C)
		• IP Interface (C)
		  - Delay (R)
		  - Jitter (R)
		  - Packet Loss (R)
			• GSCR para. A9.5.1.2.4
			• GSCR para. A9.5.1.2.4
			• GSCR para. A9.5.1.2.4
			• GSCR para. A9.5.1.2.4
			• GSCR para. A9.5.1.2.5
			• GSCR para. A9.5.1.2.5
			• GSCR para. A9.5.1.2.5
			• GSCR para. A9.5.1.2.5
			• GSCR para. A9.5.1.1
			• GSCR para. A9.5.1.1
			• GSCR para. A9.5.1.1
			• GSCR para. A9.5.1.1
			• GSCR para. A9.5.1.1
			• GSCR para. A9.5.1.1
			• GSCR para. A9.5.1.1
			• GSCR para. A9.5.1.1
			• GSCR para. A9.5.1.1.4
			• GSCR para. A9.5.1.2.9
			• UCR para. A9.5.1.2.9a
			• GSCR para. A9.5.1.2.9b
			• GSCR para. A9.5.1.2.9c

T1 CAS	No[1]		
T1 SS7 (ANSI T1.619a)	No[1]		
T1 ISDN PRI (ANSI T1.607/ANSI T1.619a)	No[1]		
E1 ISDN PRI (ITU-T Q.955.3)	No[1] (Europe only)		
E1 CAS	No[1] (Europe only)		
E1 SS7 (ANSI T1.619a)	No[1] (Europe only)		
DSN Transport Interfaces			
Interface	**Critical**		
E1 (HDB3) Proprietary	No[2]		
T1 (B8ZS/ESF) Proprietary	No[2]		
100 Mbps Ethernet	No[2]		
SUT Features And Capabilities			
Feature/Capability	**Critical**	**Requirements Required or Conditional**	**References**
Synchronization	Yes	• Timing (R)	• GSCR para. A9.5.1.2.7

Network Management	Yes	• Management Option (R)
		  - Local Management (Front Panel and/or External Console) (C)
		  - ADIMSS (C)
		• Fault Management (C)
		• Loop Back Capability (C)
		• Operational Configuration Restoral (R)
			• GSCR para. A9.5.2.1
			
			• GSCR para. A9.5.2.2
			• GSCR para. A9.5.2.3
			• GSCR para. A9.5.3

Security	Yes	• DIACAP (replacement for DITSCAP) (R)	• GSCR para. A9.6

NOTES:
1 The GSCR does not stipulate a minimum Access interface requirement for a Strategic or Tactical Network Element.
2 The GSCR does not stipulate a minimum Transport interface requirement for a Strategic or Tactical Network Element.

LEGEND:

A	Appendix	HDB3	High Density Bipolar 3
ADIMSS	Advanced DSN Integrated Management Support System	IP	Internet Protocol
		ISDN	Integrated Services Digital Network
ANSI	American National Standards Institute	ITU-T	International Telecommunication Union - Telecommunication Standardization Sector
B8ZS	Bipolar Eight Zero Substitution		
BERT	Bit Error Rate Test	Mbps	Megabits per second
C	Conditional	MLPP	Multi-Level Precedence and Preemption
CAS	Channel Associated Signaling	MOS	Mean Opinion Score
DIACAP	DoD Information Assurance Certification and Accreditation Process	para	paragraph
		PRI	Primary Rate Interface
DITSCAP	DoD Information Technology Security Certification and Accreditation Process	Q.955.3	ISDN Signaling standard for E1 MLPP
		R	Required
DoD	Department of Defense	SS7	Signaling System 7
DS1	Digital Signal Level 1	SUT	System Under Test
DSN	Defense Switched Network	T1	Digital Transmission Link Level 1 (1.544 Mbps)
DSS1	Digital Subscriber Signaling 1	T1.607	ISDN – Layer 3 Signaling Specification for Circuit Switched Bearer Service for DSS1
E1	European Basic Multiplex Rate (2.048 Mbps)		
ESF	Extended Super Frame	T1.619a	SS7 and ISDN MLPP Signaling Standard for T1
GSCR	Generic Switching Center Requirement	UCR	Unified Capabilities Requirements

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5. JITC distributes interoperability information via the JITC Electronic Report Distribution (ERD) system, which uses Unclassified-But-Sensitive Internet Protocol Router Network (NIPRNet) e-mail. More comprehensive interoperability status information is available via the JITC System Tracking Program (STP). The STP is accessible by .mil/.gov users on the NIPRNet at https://stp.fhu.disa.mil. Test reports, lessons learned, and related testing documents and references are on the JITC Joint Interoperability Tool (JIT) at http://jit.fhu.disa.mil (NIPRNet), or http://199.208.204.125 (SIPRNet). Information related to DSN testing is on the Telecom Switched Services Interoperability (TSSI) website at http://jitc.fhu.disa.mil/tssi.

6. The JITC point of contact is Mr. Joseph Roby, DSN 879-0507, commercial (520) 538-0507, FAX DSN 879-4347, or e-mail to joseph.roby@disa.mil. The JITC's mailing address is P.O. Box 12798, Fort Huachuca, AZ 85670-2798. The tracking number for the SUT is 0713001.

FOR THE COMMANDER:

Enclosures a/s   for RICHARD A. MEADOR
                                                     Chief
                                                     Battlespace Communications Portfolio

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    Division, J68
Defense Information Systems Agency, GS23

ADDITIONAL REFERENCES

(c)   Defense Information Systems Agency, "Department of Defense Voice Networks Generic Switching Center Requirements (GSCR), Errata Change 2," 14 December 2006, Revised 27 March 2007

(d)   Department of Defense, "Department of Defense Networks, Unified Capabilities Requirements," 21 December 2007

(e)   Joint Interoperability Test Command, "Defense Switched Network Generic Switch Test Plan (GSTP), Change 2," 2 October 2006

(f)   Joint Interoperability Test Command, Memo, JTE, "Special Interoperability Test Certification of Veraz I-Gate 4000 Edge with Software Version C 2.5.1.6_ES," 8 April 2008

Enclosure